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User Manual Odyssey7Q

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2014

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RELEASE NOTES ODYSSEY7Q

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Convergent Design, Inc.
4465 Northpark Dr, Suite 400 | Colorado Springs, CO 80907 | USA
TEL: ++ (720) 221-3861 | FAX: ++ (720) 227-9296 | Office Hours: 8:00 A.M. to 5:30 P.M., Monday – Friday [Mountain Time (GMT – 7)]
EMAIL: Support@Convergent-Design.com | WEBSITE: www.Convergent-Design.com

Read This First!

Before you begin using the Odyssey7Q, we strongly suggest you review the included Quick Start Guide, as well as:

1. Always record to the INTERNAL MEDIA OF THE CAMERA; this is critical for proper timecode and ideal for dual media / backup.

2. **DO NOT REMOVE THE FOUR SCREWS FROM REAR OF CASE.** This may result in damage to the OLED panel. Such damage is not covered by warranty.

3. Power and Cabling: **Make sure you have PROPER POWER (6.5-34vdc)**, plugged in to the proper power port (left side of recorder), and that 3G-rated SDI cables are used.

4. ***Power source must be able to provide up to 24 watts at all times to the Odyssey7Q.***

5. When powering the Odyssey7Q from an ARRI ALEXA camera, we recommend using the 24V R/S Fischer-3 output from the ALEXA using the optional Convergent Design cable.

6. Familiarize yourself with the equipment and test prior to shooting.

7. Before using the SSD's it is **IMPERATIVE TO FORMAT them in the Odyssey7Q.** For-matting SSD media is a DESTRUCTIVE PROCESS; any existing data will be lost during format.

8. Ensure that the camera's viewfinder data is not being recorded; **IF YOU SEE VIEW-FINDER DATA ON THE ODYSSEY7Q monitor, then it will be recorded!** In a future update, if your camera can provide both clean and data-overlayed video feeds, it will be possible to monitor one while recording the other.

9. **NEVER DELETE ANY FILES OFF AN SSD FROM A COMPUTER,** except when going through a firmware update procedure.

10. While we recommend that you always maintain the latest firmware on your Odyssey7Q, we DO NOT RECOMMEND UPDATING IF YOU ARE IN THE MIDDLE OF A SHOOT (unless instructed by Technical Support).

11. When offloading media, **ALWAYS MAKE A BACKUP COPY**, ideally to a RAID1 drive.

12. Be sure to allow the Odyssey7Q to finish closing a Record file before taking any further action.

Product Features

MONITORING

- Professional Monitor: 7.7” 1280x800 OLED panel featuring true blacks, and accurate color with a full range color gamut for REC709 or DCI-P3 viewing.
- Image analysis tools: Waveform, Vectorscope (in future update), Histogram, False color exposure view, Zebra, three-mode Focus assist, pixel Zoom (1:1 & 2:1), LUTs, and Frame Guides.
- Multi-stream Monitoring: up to four HD video signals can be input and viewed simultaneously (quad-split) or live-switched (choose between inputs for full screen display). A future paid update will allow Multi-Stream Recording of up to four simultaneous Apple ProRes 422(HQ) files and an XML log file of the live switch.
- Flexible I/O: two dedicated 3G-SDI inputs, two dedicated 3G-SDI outputs, two switchable 3G-SDI input/outputs, one HDMi input, one HDMi output.

RECORDING

- High-capacity recording. Two high-speed solid state Drives (SSD), available in 256 GB or 512 GB, allow for extended recording.
- Uncompressed 4:4:4 RGB HD video recording. Record HD video in 10-bit DPX files. Apple ProRes 422(HQ) up to 1080/30p, 1080/60i and 720/60p. Additional popular compressed codecs will be available at a later date via free firmware update.
- RAW record Options. Optional recording features available at any time for purchase or time-based rental*.

  RAW Record options include: ARRIRAW (ALEXA), CANON RAW (C500), SONY RAW (FS700), 2K RAW (various specialty & industrial manufacturers) and RAW conversion to Apple ProRes 422(HQ).

- Apple ProRes 422(HQ).
- Compressed **Apple ProRes 422**

OTHER FEATURES

- **Versatile Power.** Wide voltage range (6.5-34v) and low draw (8-15w, depending on mode) for great flexibility of battery and other power options.
- **Light Weight.** A magnesium case and efficient board design means only 1.25lbs for the basic unit.
- **Small Size.** Even with a 7.7" screen, the Odyssey7Q is approximately 8"x6"x1", making it easy to use on cameras, mounted in tight spots or held in one's hand.
- **Dual SSD Architecture.** Long record time, will automatically span from one SSD to the other.

MOUNTING

The Odyssey7Q features three ¼"x20 threaded sockets, one on the lower rear of the case and one each on the left and right sides of the case. Do not exceed 11mm of depth when inserting a bolt, otherwise damage may occur to the Odyssey7Q. Additionally, there are four M3 threaded socketson the rear of the case and two M4 sockets on each of the sides of the case.

Product Specifications

DISPLAY	7.7″ OLED, 1280x800, RGB 8-bit panel, ~ 16 million colors, wide gamut, 3400:1 contrast, 176° Viewing, true blacks
SDI VIDEO I/O	SD*/HD/3G support: single/Dual link, 2-inputs, 2-Outputs, 2 bi-Directional (can be inputs or outputs), Full-size BNCs
HDMI VIDEO I/O	HDMi I/O Version 1.4a support, up to 1080p30 422 8-bit
LUT SUPPORT	ARRI, CANON, SONY, or custom user-loadable LUTs*
FOCUS ASSIST	Video + edges, edges Only, enhanced edges, user choice of color: red, Green, or blue + pulsing
ZEBRAS	Currently one adjustable level, future two levels, one allows for a user specified range, the other is active on a specified ire level and above
FALSE COLOR	False color with 5 programmable levels
WAVEFORM MONITOR	Luma only, RGB Parade, Red only, Blue only, Green only
HISTOGRAM	Luma only, RGB Parade, Red only, Blue only, Green only
VECTORSCOPE**	color vectorscope with 2X zoom
1:1 PIXEL MODE	Image Zoom, Vertical Flip , aspect ratio Guides
QUAD STREAM DISPLAY	Display four independent HD streams simultaneously (Quad-split) with live-switch capability
DIGITAL AUDIO I/O**	8-channel embedded audio (48KHz, 24-bit) (2 channel initially, 8-channel via future firmware update)
ANALOG AUDIO I/O**	3.5mm stereo unbalanced input up to -10db, 3.5mm stereo headphone output
REMOTE AND TIMECODE**	RS-232 I/O programmable GpiO. Timecode: LTC I/O (BNC) or embedded SDI / HDMi
USER INTERFACE	capacitive touchscreen, two user-programmable context-sensitive mechanical keys
DC POWER INPUT	6.5 to 34 VDc with built-in reverse polarity protection; locking Neutrik connector, built-in power switch
POWER DRAW	8 watts (monitor only), 9-15 watts (simultaneous monitor/record mode)
WEIGHT AND SIZE	560 grams / 1.3 lbs., 7.9″ x 6.1″ x 1.0″ (200 x 155 x 25 mm), -10 to +40°c
(Operating), -20 to +70°c (storage)	Overlay pre-recorded still frame on live video with opacity slider*
ONION SKINNING**	Overlay pre-recorded still frame on live video with opacity slider*
VIEW MONITOR OUT**	Display the monitor-out (viewfinder data) on the OLED while recording a clean video signal.
RECORD CLEAN VIDEO	Available when using the SONY F3, SONY FS700, CANON C500 and ARRI Alexa cameras.
RECORD TRIGGERS	touchscreen, SDI record trigger (ARRI, CANON, Panasonic, red, SONY), Optional remote control cable**
RECORDING SSD MEDIA	Convergent Design SSDs with power-loss protection, in 256 and 512 GB sizes, 420Mb/sec write, 500Mb/sec read speed, compatible with USB 3.0 and thunderbolt adapters. SSDs and adapters sold separately.
RECORDING FORMATS (BASE ODYSSEY7Q)**	compressed formats: 1080p 10-bit YCC 422 up to 120fps, 1080p RGB 12-bit 444 up to 60fps* uncompressed formats: 1080p RGB 10/12-bit 444 up to 60fps

** Available in RAW modes only currently.*

*** Available in the future via a free firmware update.*

Recording Capabilities

The Odyssey7Q can record a variety of HD video signals and, with optional recording keys, several RAW data video formats. With another optional recording key the Odyssey7Q will also be able to record up to four HD video signals simultaneously.

All recording options are available for demo on the Odyssey7Q, but will appear with a blue or pink line "watermark" across the recorded image.

Recording options are available to purchase or (in the near future) rent on a time-active basis from the Convergent Design website at:
https://convergent-design.com/products/recording-options.html

INCLUDED FREE WITH ODYSSEY7Q

HD VIDEO	The Odyssey7Q records HD video as uncompressed 12-bit or 10-bit.DPX stacks or
	10-bit Apple ProRes 422(HQ)
	All .DPX files are recorded 4:4:4. 4:2:2 video signals are up-converted to 4:4:4.
	3G-SDI: accepted 1080p/psf frame rates: 23.98, 24, 25, 29.97, 30, 50, 59.97, 60 (adding More) NOTE: 50, 59.97 & 60 are only available in DPX
	HDMI: accepted 1080p/psf frame rates: 23.98, 24, 25, 29.97, 30, 50i, 60i, 720p50, 60
	Compressed Apple ProRes 422(HQ) 1080p/psf 23, 24, 25, 29; 1080i 50, 60; 720p 50, 60
	2K/1080p 12-bit support 23.98, 24, 25, 29.97 & 10-bit in DPX
	Future free firmware updates will include additional compressed video codecs with expanded frame rate, resolution selections, interlaced support, and pull down support.

MULTI-STREAM HD VIDEO MONITORING	3G-SDI accepted 1080p/psf frame rates: 23.98, 24, 25, 29.97, 30, 50i, 60i
	Up to four HD video signals viewable simultaneously.
	OLED display divided into quadrants or a single input may be selected for full screen display. Live-switch between inputs directly.
	Inputs are SDI A, SDI B, SDI A I/O, SDI B I/O (signals auto-detected; [**SDI A]** must always be present).
	HD video signals do not need to be Genlocked.
	HD video signals do not need to match frame rates.
	HDMi input available in future free firmware update.
	NOTE: this is a monitoring mode only. A future option will allow recording of up to four HD video signals.
	If feeding video from a switcher to Odyssey7Q, the switcher must have internal frame synchronizers or the cameras input to the switcher must be genlocked.

RECORDING OPTIONS (AVAILABLE FOR PURCHASE)

Additional recording options are available for purchase and/or rental through our website.

ARRI ALEXA ARRIRAW *(Available for purchase and/or daily rental)*	The Odyssey7Q supports all ARRIRAW formats and frame rates output by Alexa Classic cameras.
	ARRIRAW data is recorded as .ari files.
	ARRIRAW 16:9 frame rates: 23.98, 24, 25, 29.97, 30, 48*, 50*, 59.97*, 60*
	ARRIRAW 4:3 frame rates: 23.98, 24, 25, 29.97, 30, 48* **Future Firmware Update for 4:3 Support*
	**NOTE: ARRIRAW above 30fps requires two SSDs to simultaneously record. In a future firmware update only one SSD will be required for all frame rates.*

More Info: https://convergent-design.com/products/odyssey7q/arri-alexa

CANON C500 CINEMA RAW *(Available for purchase and/or daily rental)*	The Odyssey7Q supports CANON C500 4K RAW. Future firmware updates will support 4K "Half RAW", "slow & Fast" mode, and other C500 formats.
	CANON Cinema RAW data is recorded as .RMF files.
	4K & QHD (4096x2160 & 3840x2160)
	supported 4K RAW frame rates: 23.98, 24, 25, 29.97, 50*, 59.94*
	2K/1080p 12-bit support 23.98, 24, 25, 29.97 & 10-bit
	**NOTE: CANON RAW 50-60p requires two SSDs to simultaneously record.*

More Info: https://convergent-design.com/products/odyssey7q/canon-c500

SONY FS700 RAW *(Available for purchase)*	The Odyssey7Q supports SONY FS700 4K & 2K RAW, high bit-depth HD derived from 4K. Future firmware updates will support 4K compressed solutions, other recording options.
	FS700 4K RAW frame rates: 23.98, 25, 29.97, 50, 59.94, 4K 440 frame burst mode: 100, 120
	FS700 2K RAW frame rates: 23.98, 25, 29.97, 50, 59.94, 100, 120, 200*, 240*
	NOTE: FS700 4K/2K RAW data is recorded as .DNG files.
	FS700 4K RAW to Apple ProRes 422(HQ) / 10-bit / 23.98, 25, 29.97
	NOTE: **2K RAW 200fps and 240fps, 4K RAW 50/60 and **100/120 Burst Recording** require that you record to two SSDs simultaneously.*

More Info: https://convergent-design.com/products/odyssey7q/sony-fs700

HD/2K RAW

Future firmware updates will include a recording option for several industrial and special-use cameras.

Record Options Rental

RENTAL ACTIVATION KEYS

Rental Activation Keys may be purchased though our website for the Canon C500 Cinema RAW and the ARRI Alexa ARRI RAW recording options. Please visit the links in the Recording Capabilities section for more information.

PARAMETERS FOR RENTALS

Rentals are based on a 24 hr period, Rentals can be added to the unit in daily (24 hour) increments up to a maximum of 30 days at a time.

A rental starts the first time a record is performed in the rental codec, then the 24 hour clock starts.

Note that during a 24 hr rental period you will not be allowed to adjust the clock after the first record. Thus users must set a central time, or choose a timezone that will best fit all of their given locations in that 24 hr period.

After 24 hours a user may adjust the clock as needed, till the next record is performed.

Rentals are unit specific, by the unit serial number, and must be purchased via our website. Once a rental key is input into a unit, there is no way of retrieving or transferring the rental to another unit.

To activate a rental simply enter the 8 character key into the units activation section.

To check the status of an active rental touch the codec box.

When a rental period has two days remaining, the rental text will change to yellow

When a rental period has one day remaining, the time will display in the form of minutes and will be flash for the last hour.

When there is one minute remaining, if a record is started, that entire clip will be recorded without a watermark regardless of length up to a maximum of 80 mins. (In other words, will let you finish your last take, which can be a maximum of filling up both drives, based on a RAW format)

After the final clip the time remaining will change back to a white 0 min's.

For more information or to purchase Rental Options please visit our the Recording Options page of our website at https://convergent-design.com/products/recording-options.

For support with Rental Options please visit our support portal at https://convergent-design.com/support

Record Time Capacities

The Odyssey7Q can record numerous video and data formats. Record time varies based on format. The chart below indicates maximum record time in minutes based on the use of two 512 GB SSDs (1TB). For 512 GB (one 512 GB SSD or two 256 GB SSDs), divide in half. For 256 GB, divide by four.

MAXIMUM RECORD TIME IN MINUTES TO TWO 512GB SSDS (1TB)

Recording Format	24fps	25fps	30fps	50fps	60fps
1080p Apple ProRes 422(HQ)	660	636	528		
1080i Apple ProRes 422(HQ)				318	264
720p Apple ProRes 422(HQ)				580	528
2K Uncompressed DPX (RGB 444 12-bit)	70	66	60		
2K Uncompressed DPX (RGB 444 10-bit)	84	80	62		
1080p Uncompressed DPX (RGB 444 12-bit)	70	66	60		
1080p Uncompressed DPX (RGB 444 10-bit)	84	80	62	38	33
1080p Compressed 444 (12-bit@24fps, 10-bit@60fps)**	500	480	400		

***Not currently supported. Available through a future firmware upgrade.*

Record Time Capacities (Optional)

Recording options can be purchased through our website. The following are the approximate recording times while recoring with these options.

ARRIRAW OPTION

Recording Format	24fps	25fps	30fps	50fps	60fps
ARRIRAW 16:9	100	97	80	46	40
ARRIRAW 4:3 (top framerate = 48fps, 38min rec. time)	76	73	60		

CANON C500 4K RAW OPTION

Recording Format	24fps	25fps	30fps	50fps	60fps
Canon 4K/QHD RAW (100/120fps = 4K half height RAW)	62	60	50	30	25

SONY FS700 RAW OPTION

Recording Format	24fps	25fps	30fps	50fps	60fps	100fps	120fps	200fps	240fps
Sony 4K RAW	50	50	40	24	20				
Sony 2K RAW	202	196	164	96	80	48	40	24	20
4K RAW to HD Apple ProRes 422(HQ) "4K2HD"	775	744	620						
4K RAW to HD compressed 444 "4K2HD"	500	480	400						
4K RAW to 4K compressed 422 "4K24K"	194	186	155						
4K RAW burst (440 frames)						4.4 sec.	3.7 sec.		

2K RAW SPECIALTY CAMERA OPTION

Recording Format	24fps	25fps	30fps	50fps	60fps
2048x1080 10-bit	257	246	205	123	102

MULTISTREAM HD OPTION

Recording Format	24fps	25fps	30fps	50fps	60fps
2-Stream Apple ProRes 422(HQ)	330	318	264		
4-Stream Apple ProRes 422(HQ)	165	159	132		

Visit Convergent-Design.com for information on available recording options.

Package Contents

Odyssey7Q box contains one (1) Odyssey7Q monitor/recorder and one (1) universal power supply.

MEDIA AND ACCESSORIES SOLD SEPARATELY!

Convergent Design SSD Media

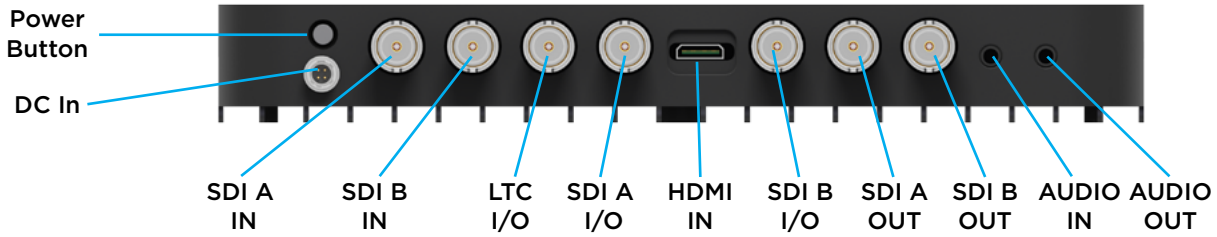
2.5” PREMIUM SSD MEDIA

To enable recording on the Odyssey7Q, you must use specific SSD media: Only Convergent Design Premium SSD’s will work in the Odyssey7Q. These SSD’s, available in 256GB and 512GB, must be purchased separately. Firware updates must be completed only with Convergent Design Pemium SSDs.

256GB SSD for Odyssey7 and 7Q	**CD-SSD-256GB**
512GB SSD for Odyssey7 and 7Q	**CD-SSD-512GB**

Odyssey7Q Anatomy

ODYSSEY7Q - BOTTOM



There are eleven connector ports on the bottom side of the Odyssey7Q (left to right)

PWR ON	Power input socket to Odyssey7Q (see Getting Started – Power). Just in front of the PWR ON port is a button, which is a Force Power On/Off control. Hold button five seconds to force power off. This is only to be used if standard power on or off procedures fail (see Getting Started – Initializing).
SDI A IN	BNC connector for 3G-SDI input A
SDI B IN	BNC connector for 3G-SDI input B
LTC IO	BNC connector for Linear Timecode input/output
SDI A IO	BNC connector for 3G-SDI input/output A. In Multi-Stream monitoring mode, the Odyssey7Q can accept up to four HD video inputs. These IO ports allow additional inputs or additional outputs for the Odyssey7Q.
HDMI IN	HDMI 1.4 input from HDMI video source.
SDI B IO	BNC connector for 3G-SDI input/output B. In Multi-Stream monitoring mode, the Odyssey7Q can accept up to four HD video inputs. These IO ports allow additional inputs or additional outputs for the Odyssey7Q.
SDI A OUT	BNC connector for 3G-SDI output A
SDI B OUT	BNC connector for 3G-SDI output B
AUDIO IN	3.5mm mini-phone stereo socket for analog audio in. This input will be enabled in a free future firmware update.
AUDIO OUT	3.5mm mini-phone stereo headphone socket.
NOTE: SDI A IO and SDI B IO are only active in Mutlistream and certain RAW/uncompressed formats. These connectors are not active in Apple ProRes 422 HQ.	

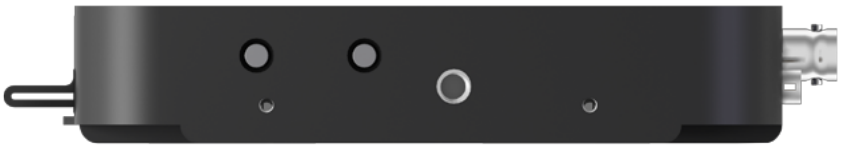
ODYSSEY7Q - TOP

There are two Solid State Drive (SSD) slots, SSD1 and SSD2.

Only Convergent Design 256 GB and 512 GB SSDs can be used to capture video on the Odyssey7Q. The Odyssey Utility Drive can be used for firmware updates and other future functions, but not to record video files. To mount SSD, insert connector-end first with the label facing forward and the handle near flush with the back of the Odyssey7Q. Push gently but firmly until the handle flange is flush with the top of the Odyssey7Q. It is a snug fit, but the SSD should insert smoothly.

ODYSSEY7Q - LEFT SIDE

There are two Function buttons, F1 LOCK and F2 SHUT DOWN.



F1 LOCK	Lockout control for the Odyssey7Q touchscreen. Push to engage and SCREEN LOCK will appear in the center of the touchscreen's Upper Tool Bar. Push F1 again to disengage.
F2 SHUT DOWN	Preferred method to power down the Odyssey7Q. Properly closes files on the SSDs and performs other maintenance functions (see Getting Started -- Powering Down). Push to activate prompt asking SAFELY POWER DOWN UNIT? *In a future free firmware update it will be possible to program these buttons for additional func-tions.*

ODYSSEY7Q - RIGHT SIDE

There are three connector ports, (top to bottom) USB, HDMI OUT and RMT.

USB	An access point for servicing by Convergent Design.
HDMI OUT	Output to an HDMI compatible device
RMT	A remote control connection to the Odyssey7Q. In a future free firmware update the RMT port will allow control interface with functions of the Odyssey7Q.
KENSINGTON LOCK PORT	A rectangular hole above the RMT port is for accepting a Kensington Security Lock.

MOUNTING

The Odyssey7Q features three ¼"x20 threaded sockets, one on the lower rear of the case and one each on the left and right sides of the case. Do not exceed 11mm of depth when inserting a bolt, otherwise damage may occur to the Odyssey7Q. Additionally, there are four M3 threaded sockets on the rear of the case and two M4 sockets on each of the sides of the case.

ODYSSEY7Q ACTIVATION

Convergent Design requires each Odyssey7Q to be registered via our website. This is so that we can provide notices of free firmware updates, issue alerts for critical issues, and track rentals or purchases of record options.

Upon first initializing of the Odyssey7Q (see below), a prompt will appear asking if the device is to be Activated at this time or if it is to be used in DEMO mode. In DEMO mode the Odyssey7Q is fully functional, however a blue or pink bar "watermark" will appear in any recorded video.

In order to Activate the Odyssey7Q after initial purchase, go to http://www.convergent-design.com to register and activate your unit. When you have registered a new account (or logged into your existing account) you will be able to Add a Device to your account at which time you will be provided the Basic Activation Key for your device.

The Activation prompt will appear upon every initialization of the Odyssey7Q until the device is Activated. When Activate is selected, follow the prompts to Activate the Odyssey7Q using the Basic Activation Key you were given on the website.

Also, make sure your Odyssey7Q has the latest firmware, posted here:
https://convergent-design.com/support/firmware-downloads.html

See Firmware Updates under the Appendix below for more information on how to put new firmware on your Odyssey7Q.

INITIALIZING

Plug in power to the Odyssey7Q. It should take about 5-10 seconds to initialize, depending on the mode it is set to. If the Odyssey7Q does not self-initialize, push the PWR ON button next to the power socket on the lower left corner of the Odyssey7Q.

As part of the initializing process, SMPTE color bars may appear briefly on the screen. If there is a signal input into SDI A IN that matches the record format the Odyssey7Q is set to, then the image should appear on the screen. If there are SSDs mounted in the Odyssey7Q then a DETECTING SSD message will appear on the lower left of the screen. If the SSD needs to be re-initialized or formatted, a second message may appear. If the Trigger Button in the Upper Tool Bar appears as a red box surrounding a white circle, then the Odyssey7Q is ready to record.

SETTING UP & USING THE ODYSSEY7Q

The touch screen of the Odyssey7Q features all of the device's controls in a straightforward, easy to navigate structure. Each box is a "virtual button." Tap it briefly to activate/deactivate it, or hold it for a few seconds to open up the menu defining its function. The controls at the top of the display (Upper Tool Bar) are the recording, playback and formatting administration. The controls at the bottom of the display (Lower Tool Bar) are the image analysis adjustments.

Upper Tool Bar – Record Mode

THE ODYSSEY7Q MENU

Starting on the left, tapping the [☼] button brings up the initial setup menus for the Odyssey7Q. Don't be intimidated by the number of selections in the [☼] section. This is by far the most in-depth section of the Odyssey7Q touchscreen menus:

ODYSSEY | SETUP | RECORD | INPUTS | OUTPUTS

(Please see the Odyssey7Q Menus section of this manual for a full explanation of all menu functions.)

POWERING DOWN

While it may seem an odd time to note this, it is important to know that there is a preferred method to shutting down the Odyssey7Q. On the left side of the case, the F2 SHUT DOWN button should be pressed. This prompts a confirmation to "SAFELY POWER DOWN UNIT?" Powering down in this fashion properly closes the files and directory system on the SSDs, preventing corruption. If the Odyssey7Q should ever suffer a failure and the F2 SHUT DOWN sequence does not function properly, the unit can be Force Power Off by holding the PWR ON button by the power socket on the lower left corner of the Odyssey7Q, or simply by pulling the power connector out of the power socket. If the Odyssey7Q is ever powered down in this fashion, it is important to run a recovery on the SSDs in the Odyssey7Q menu at MENU » ODYSSEY » SSD'S » RECOVER SSD1 » RECOVER SSD2

RECORDING TO SSD MEDIA

The SSDs will automatically Span from SSD1 to SSD2. This means that if a file is recording to SSD1 and fills the available memory, the recording will continue uninterrupted on SSD2. The exception to this is when recording in a high data rate mode that requires both SSDs to be recorded to simultaneously, such as FS700 Record Option, 2K RAW @ 240fps. For more information on record times and SSD capacity, see Record Time Capacities. A future free firmware update will also allow the option of simultaneous dual recording, in which both SSDs record identical files for backup purposes.

LOSS OF POWER DURING A RECORD

You should never power off the camera while recording, many camera's including the ALEXA, disable the user from doing so while recording. Included in the Odyssey 7Q's recovery mechanism, is in case of power loss, you will loose the last couple frames of the record, but not the last take. You will receive several error messages due to the loss of source. If the unit fails to close the last clip and return to normal operation once the source has returned. You will need to remove the power from the unit, then re-power the unit.

After any failure of this type, the Odyssey will automatically mark the SSD's as full, once power is restored to the unit. You will need to offload the footage, before you will be able to continue recording, in order to help ensure proper recovery of the previous recordings.

DOWNLOADING MEDIA

Always make sure to properly Safe Eject to dismount SSDs before removing from Odyssey7Q. While the Odyssey7Q drives are exclusive Convergent Design products, they utilize a standard 2.5" SATA interface. No expensive proprietary download stations are required. Consumer card adapters such as Seagate GoFlex adapters (see *Third Party Accessories* in this manual) are available with Thunderbolt or USB 3.0 interface. Thunderbolt is fastest and USB 3.0 is most common and self-powering. Firewire 800 is not recommended as it will take a very long time to download files.

Convergent Design offers a USB 3.0 SSD Adapter (CD-SSD-USB3) through authorized dealers and distributors. This device allows you to access files on the Convergent Design SSDs on any computer with a USB 3.0 or USB 2.0 port. (Please note that USB 2.0 ports have much slower data transfer rates.)

FILE MANAGEMENT SOFTWARE

Convergent Design has three free file utility programs, CD transfer, CD clip Merger and CD ProRes Transfer Tool, available for download for both Mac & PC on our website.
https://convergent-design.com/support/firmware-downloads/software-utilities.html

CD DATA UNPACKER

Higher frame rate 8-12-bit (1920x1080, 2048x1080) DPX files are recorded in "Packed" files. CD Data Unpacker Utility copies and converts 1080p/59.94 and 1080p/60 DPX files and clips. The DPX files are converted from a "Packed" to "Unpacked" data format. Other DPX frame rates and other files formats do not need unpacking.

CD CLIP MERGER

Some high data rate formats need to be striped (aka RAIDed) across two SSDs when recording in the Odyssey7Q. After offloading these file folders onto a local drive on a computer, CD Clip Merger combines matching RAIDed folders into single file folders.

Odyssey7Q RAIDed recording formats include ARRIRAW 4:3 @ 48fps and Sony FS700 2K RAW @ 200fps and 240fps.

Basic Instructions for Using CD Clip Merger Software

1. Create a folder to hold your footage on our Hard Disk Drive or Raid System, giving it a name meaningful to you, such as "Project Name - Camera A - 2013-09-12"

2. Open the }CLIPS{_Odyssey7Q folder on your first SSD and copy all of the folders to the folder created in Step 1. Do not copy the folder itself, copy the contents of the folder.

3. Open the }CLIPS{_Odyssey7Q folder on your second SSD and copy all of the folders to the folder created in Step 1. Do not copy the folder itself, copy the contents of the folder.

4. Run the CD Clip Merger Program.

Additional instructions are available in the "Readme" file included in the download.

CD Apple ProRes TRANSFER 1.2

Copies Apple ProRes files recorded on the Odyssey7Q and merges files within each clip. Also optimizes Apple ProRes clips for playback and editing. *Note: While not required, offloading files from SSDs using this tool is a more efficient workflow than other methods.*

FILE STORAGE

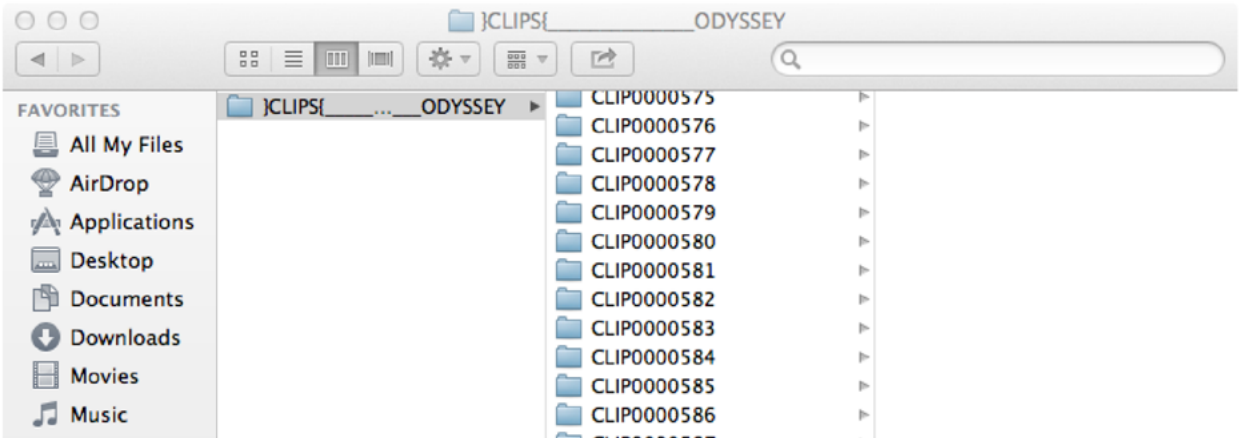
The Odyssey SSDs support read rates of 500 Mbytes/sec. Keep in mind you will be limited by the slowest median in the transfer process. For example: eSATA 3GBps interface cards have a max performance of ~270Mbps, and eSATA 1.5GBps have a max performance of ~130Mbps. typical Hard Drives (non-RAID) generally perform anywhere in the range of 80-130MbpsFor maximum performance, make sure you are using eSATA 6 GBps, USB 3.0 or thunderbolt to a RAID configuration.

Video Format	Video Data Rate	Suggested RAID Configuration Real Time Playback/Edit
ARRI/2K/1080p24 4:4:4 10-Bit DPX	186.6 MB/Sec.	300
1080p25 4:4:4 10-Bit	194.4 MB/Sec.	300
1080p30 4:4:4 10-Bit	233.3 MB/Sec.	400
1080p50 10-Bit	400 MB/Sec.	600
1080p60 10-Bit	500 MB/Sec.	600
HD Compressed Apple ProRes 422	30MB/Sec.	100
2K RAW 23.98-120	500 MB/Sec.	600
4K RAW 23.98-29.97	500 MB/Sec.	600
4K RAW 50/60p 2K 200/240p	850 MB/Sec.	1000

WORKING WITH FILES RECORDED BY THE ODYSSEY7Q

There are numerous post systems and NLEs that can read natively the various file formats recorded by the Odyssey7Q. Some NLEs may require plug-ins in order to read certain file formats. Blackmagic Design Resolve software is available for free and can read all formats recorded by the Odyssey7Q.

FILE STRUCTURE



UNCOMPRESSED SUPPORT (DPX SEQUENCE)

All Uncompressed recording on the Odyssey 7Q is recorded as 10 bit RGB 4:4:4 DPX, this is for all sources regardless if the source is 8 bit, 10 bit, 4:2:2, 4:4:4. with 12 bit camera's the files are recorded as a 16 bit DPX, for more universal compatibility. Also note that with DPX files timecode, and Clip Metadata is stored in every frame, as well as in the XML file within each clip. All audio is recorded 48Hz 16 bit Uncompressed Wav audio.

Also Note 1080p59.94/60p, 1080p119/120 and 12 bit files are recorded as Packed, so our CD unpacker utility will need to be used before the files can be used in any editor.

Native 10-bit / 16-bit DPX Support

Adobe CS6 / Adobe CSCC/2014	Black Magic DaVinci Resolve	Grass Valley Eduis (Does not support 16-Bit)
Apple Color	Cineform Studio	The Foundry Nuke
AutoDesk Smoke	ColorFront OnSet Dailies	Xnview(Does not support 16-Bit)
Assimilate Scratch Lab	DJViewer	
Avid DS	Eyeon Fusion	

Plugins for DPX Support

Glue Tools	Apple FCP Pro
	Apple FCP Pro X
Meta Fuse	Avid Media Composer

Apple ProRes 422 HQ

The Odyssey 7 and 7Q records in Apple ProRes HQ which is a 10 bit 4:2:2 220Mb compressed codec. This will allow for high quality recording while avoiding high data rates of working with uncompressed video. (DPX)

Native Apple ProRes 422 Support

Adobe CC 2014*	Final Cut Pro 7	Autodesk Smoke
Apple FCP X, Aperture	Black Magic DaVinci Resolve	Sony Vegas
Cineform Studio	The Foundry Nuke	

SONY FS700 RAW SUPPORT (DNG SEQUENCES)

All FS700 Raw recording on the Odyssey7Q is recorded as a 12-bit linear Cinema DNG file. With DNG files, timecode and clip metadata is stored in every frame, as well as in the XML file within each clip. All audio is recorded 48Hz 16 bit Uncompressed WAV audio.

It is important to correctly set the white balance of the camera, as this is baked into the Raw file.

Native Cinema DNG Support

Adobe CC 2014*	Assimilate Scratch Lab (future update)
Apple FCP X, Aperture	Black Magic DaVinci Resolve

*Pending next Adobe CC update.

FS700 RAW: DEALING WITH RAW FILES

Note that FS700 RAW files are Linear, thus the files need a Gamma 2.2 correction in order to look correct. You may notice when you first import your files that they appear very dark before correction.

FS700 DAVINCI RESOLVE IMPORT SETTINGS

1. Right click on the file and select “Edit Cinema DNG Codec Settings”
2. Then under the CAMERA RAW select be sure CinemaDNG is selected from the drop down menu.
3. Set the Decode using method to CinemaDNG Default* (Also be sure your project is setup correctly)
4. Set the White Balance to As Shot

5. Set the Color Space to Rec709
6. Set the Gamma to Rec709
7. Leave Highlight Recovery off
8. Click Apply

The media pool CameraRaw settings are the same as the ones in the color page and these are designed for individual clip adjustment so its better to first set the 'project settings', 'camera raw' as you need for the whole project.

Select 'Project Settings', 'Camera Raw', 'Cinema DNG' and make sure the 'Decode using' is set to either 'CinemaDNG Default' or "Camera Metadata'

The "Camera Metadata' is the default and the best place to start if you need to change an individual clip with camera raw.

The Media pool settings are helpful if you have a mix of different clip types, you can sort by codec, select a group and adjust.

For you Convince Convergent Design has Generated several example LUT's that can be applied to your RAW footage. Keep in mind these LUTs are an approximation, and may need adjusting depending on your application.

These LUTs are available in the Firmware/Downloads section of the Convergent Design website.

**Also note that using camera metadata or CinameDNG default is also supported.*

TO LOAD 3D LUT'S INTO DAVINCI RESOLVE

1. Select the Project Settings wheel, and navigate to Look up Tables
2. Select Open LUT Folder, and copy the included example LUTS into this folder.
3. Now Select Update Lists
4. Now in the media Browser you can right click on your raw file and select 3D LUT and select the LUT you wish to apply from the list.

Note the following about each CD example LUT, and you should adjust the LUT based on your application.

FS700_1.11.100_SLOG.cube
This Lut can be applied to view a simulated SLOG2 look. based on the raw recording with the SLOG2 picture profile, also note the image should closely match the internal media.

FS700 FCP X IMPORT SETTINGS

Once you have created a new project be sure to check the following Settings:

1. Under **Final Cut Pro** select **Preferences**
2. Be sure the **Still Images** editing duration is set to **0.0.1 Seconds**
3. Select navigate to **File** and select **Import Media**
4. Navigate to the **Clips directory,** and select the **Clip Folder** contain your **FS700 Raw files.**
5. At this point you can start correcting the files to a 2.2 Gamma. using the **Color Board.**

** Note if you are recording the the internal media you can import the matching Slog2 file, and select* **Match Color** *for a close approximation of Slog2, but will most likely need additional tweaking.*

CANON C500 4K RAW SUPPORT

All Canon C500 4K recording on the Odyssey 7Q is recorded as 10 bit Cinema Raw file. Also note that with RMF files timecode, and Clip Metadata is stored in every frame, as well as in the XML file within each clip. All audio is recorded 48Hz 32 bit Uncompressed Wav audio.

It is important to correctly set the white balance of the camera, as this is baked into the Raw file.

Native Cinema Raw Support

Assimilate Scratch Lab	Black Magic DaVinci Resolve	Canon Cinema Raw Development
Adobe CC 2014		

ARRI ALEXA ARRIRAW SUPPORT

All ARRI Alexa ARRIRAW recordings on the Odyssey7Q are recorded as 12 bit ARRIRAW file, also NOTE that with ari files Timecode, and Clip Metadata is stored in every frame, as well as in the XML file within each clip. All audio is recorded 48Hz 16 bit uncompressed wav audio.

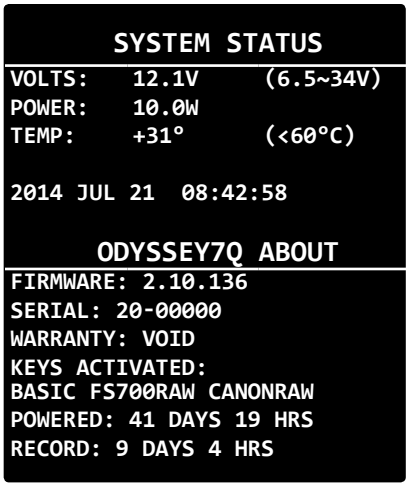
Native ARRIRAW Support

Adobe CS6 / Adobe CSCC 2014	Black Magic DaVinci Resolve	The Foundry Nuke
AutoDesk Smoke	Cineform Studio	ColorFront OnSet Dailies
Assimilate Scratch Lab	Eyeon Fusion	

For a more extensive list on ARRIRAW and workflow please visit:
http://www.arri.com/camera/digital_cameras/workflow/working_with_arriraw/recording/arriraw_t_link/

SYSTEM STATUS BUTTONS

Displays critical specs of Odyssey7Q. Input voltage, Current wattage draw of Odyssey7Q (varies with mode), current temperature of main processor. Tapping button brings up more detailed information including the ABOUT menu of the Odyssey7Q.



The Odyssey7Q has a wide internal operating temperature window, up to 65° Celsius (149° Fahrenheit). The Odyssey7Q uses its magnesium case to passively shed excess heat. There are no vents or fans. Even under most harsh conditions, the Odyssey7Q should not suffer any operational issues due to heat. However, if the internal temperature of the Odyssey7Q rises high enough there are a series of warnings and safeguards in place to protect the device and the recorded files.

TEMPERATURE WARNINGS AND SAFEGUARDS

	System Status Text & Warning	Operational Protection
59° C	Yellow text	No change to operation
61° C	Red text & flashing warning	New recordings prevented
65° C	Red text & flashing warning	Current recording stopped

The Odyssey7Q has a wide range of acceptable voltage for incoming power, from 6.5 volts to 34 volts. The total wattage draw from the Odyssey7Q varies depending on the operational mode it is set to, but is always within a very modest range from less than 8 watts to no more than 15 watts. This allows a variety of battery options to be used with the device. While there are file recovery parameters in place, it is never a good idea to lose power while in the midst of recording. If the incoming voltage to the Odyssey7Q drops low enough there are a series of warnings and safeguards in place to protect the device and the recorded files.

LOW POWER WARNINGS & SAFEGUARDS

Voltage Level	System Status Text & Warning	Operational Protection
6.7v	Yellow text	No change to operation
6.5v	Red text & flashing warning	New recordings prevented
6.0v	Red text & flashing warning	Current recording stopped

INPUT STATUS BUTTTON

Displays current video input signal type. Tapping button brings up detailed information on Input and Output signals, record mode and frame rates.

RECORD STATUS BUTTON

Displays current recording format. Tapping button brings up detailed information on recording type and frame rates.
If a rented Record Option is in use, the remaining time is noted here.

TRIGGER BUTTON

Displays status of recording mode. When button is Red with a white circle it is ready to record. When Gray there is no signal available to record. While recording, the button is Blue with a white square and the background of the entire top menu is Red. If REC Button is selected as the trigger then tapping button triggers record start/stop ([*] [RECORD] [TRIGGER] [REC BUTTON]). In PLAY mode the button becomes the Playback Trigger.

SSD1 STATUS BUTTON

Displays record time available given current settings (HH:MM). Tapping button brings up detailed information on SSD1 status.

SSD SAFE EJECT BUTTON

Prompts a confirmation to Safely Eject SSD? This is the proper method for dismounting and ejecting SSDs so that the files and directories can be closed properly.

SSD2 STATUS BUTTON

Displays record time available given current settings (HH:MM). Tapping button brings up detailed information on SSD1 status.

REC/PLAY BUTTON

Displays current status as to whether Odyssey7Q is in record or playback mode. Tapping button toggles between modes. *NOTE: playback Mode changes the upper and lower tool bars. See playback Mode, below.*

CLIP METADATA BUTTON

Displays detailed information on clip metadata. Clip name, Reel name/number, Scene name/number, Take #, Day #, Camera designation and Project name are indicated. Tapping on button opens menu to adjust clip metadata.

LAST TAKE BUTTON

Displays timecode start and elapsed time of last recorded take. Tapping button brings up detailed information of the last take recorded.

AUDIO METERS

Displays left and right audio levels. Press and hold Level Meter to access Audio Meters menu.

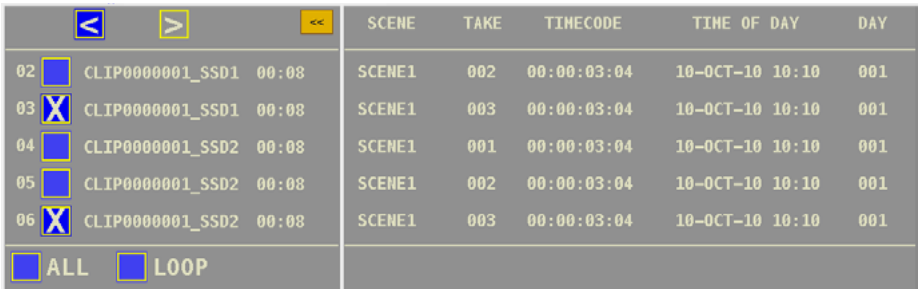
UPPER & LOWER TOOL BARS - PLAY MODE

Tapping the REC/PLAY Button toggles the Upper Tool Bar to Playback mode. Upper toolbar selections are different in Play Mode.

PLAY LIST BUTTON

PLAY LIST

Tapping button displays a list of recorded files. Files can be selected for playback and can be continuously played back in a Loop.



OUTPUT STATUS / PROJECT RATE BUTTON

2K60P*
4:2:2

Displays current SDI output setting. Tapping button brings up detailed information on the Output Status. To change these settings, go to [*] [OUTPUTS] [MODE].

LOWER TOOL BAR - PLAY MODE

A different toolbar will appear at the bottom of the monitor in playback mode.

TOOLS/SCRUB BUTTON

TOOLS / SCRUB	Toggles between Playback controls and image analysis controls.

PLAYBACK CONTROLS

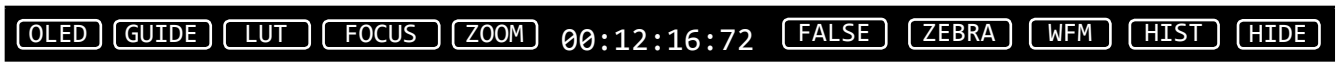
There are five deck-style playback controls. **<PREV** and **NEXT>** skip to the previous or next file in a selected playlist. **<STEP** and **STEP>** move a paused video file to the previous or next frame. ► & **II** toggle between play and pause.

SCRUB BAR

The lower right tool bar is a bar that represents the full video file. The number on the left notes the time within the video file it currently cued. The number on the right indicates the total time of the clip. A vertical line graphically represents the cue point within the file. When the deck controls are paused, the scrub bar becomes a control surface. Drag a finger across the bar to move through the file. A finger dragged on the video image area itself is a more fine-tuned control. To play the file from the selected point, use the deck controls.

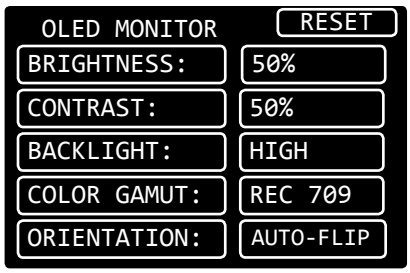
LOWER TOOL BAR

In addition to being a high quality recorder of multiple formats, the Odyssey7Q is also a full-featured production monitor. The Lower Tool Bar activates and controls the monitoring and image analysis functions.



OLED

OLED



Tapping button brings up OLED monitor settings. Controls are for Brightness, Contrast, Backlight and Color Gamut (REC709 or DCI P3). These controls are for the Odyssey7Q OLED panel only, and will not affect the recorded signal or the signal from any of the device's outputs. The Odyssey7Q display is capable of presenting the full contrast and color gamut of both the REC709 and DCI P3 standards.

Assuming a standard, properly attenuated video signal from the camera, the Odyssey7Q defaults are 50% for brightness and contrast, medium for backlight and REC709 for Color Gamut. Unless otherwise noted, any standard HD video source should be a REC709-compliant signal, not DCI P3, which is for digital cinema displays. Additional controls will be available in a future free firmware update.

GUIDE

GUIDE

Tapping button activates Frame Guides. Holding button brings up the Frame Guides settings. Current choices are 1.85:1 and 2.39:1. Additional options including user-adjustable settings will be available in a future free firmware update. The [GUIDE] button will highlight in green when active and indicate current selected frame guide (1.85, 2.39, 1.33). The native aspect ratio of the HD video image is 16:9, or 1.78:1.

LUT

LUT

A Look Up Table (LUT) is a set of exposure, contrast and color offsets to adjust an image. The Odyssey7 and Odyssey7Q offer LUTs to allow the flat LOG video signals from several popular cameras to be changed into standard REC709 video color and contrast for monitoring, while the recording remains LOG for greater color correction control in post. On the Odyssey7Q, the RAW record options also feature monitoring LUTs. A future update will allow programmable 3D-LUTs on the Odyssey7Q.

FOCUS

FOCUS

Tapping button activates Focus Assist. Holding button brings up the Focus Assist settings. There are three styles of Focus Assist available.

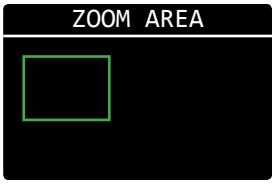
[EDGE + VIDEO] Shows video image with sharp edges highlighted in color. Also know as Peaking.

[EDGE ONLY] Shows only the sharp edges, clearly highlighting only aspects of the frame that are in focus.

[EDGE ENHANCED] Shows some picture information for framing, with sharp edges highlighted in color.
To tune the Focus Assist to your personal preference, adjust Sensitivity of the high, midrange and low frequencies. Then select a preference for Edge Color (red, green, blue). The highlighted color edges can also be set to pulse. The [FOCUS] button will highlight in green when active.

ZOOM

ZOOM



Pixel Zoom enlarges a section of the image on the OLED panel to better judge focus and other aspects of the image. The native resolution of the HD image area on the OLED panel is 1280x720. Pushing the Pixel Zoom button once enlarges the image to fit a 1280x720 window within an HD 1920x1080 frame. Pushing the Pixel Zoom button again enlarges the image so that a 1280x720 window is cut from that native resolution of the image if greater than HD (ie, 1280x720 window within 4096x2160) or doubles up pixels to make the image larger in an HD frame. The Odyssey Pixel Zoom offers the unique function of allowing the enlarged window to be moved within the image frame simply by dragging a finger or stylus on the OLED screen.

Tap anywhere inside the ZOOM area box to center the image. Coordinates are remembered until powered off.

TIMECODE

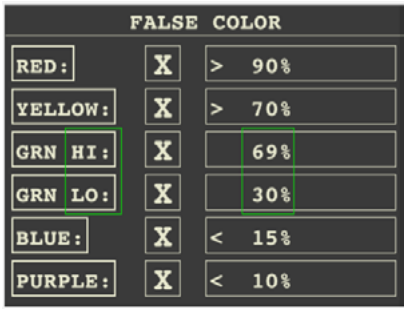
00:12:16:04

At the center of the Lower Tool Bar is a counter displaying timecode. This counter displays hours, minutes, seconds and frames in the format 00:00:00:00.

FALSE

FALSE

Tapping button activates False Color. Holding button brings up False Color settings. False Color is an exposure reference tool, attributing different colors to various brightness portions of the image. Available colors are Red, Yellow, Green, Blue and Purple. An HD video signal is measured in a scale from 0 to 109, often marked as a % or with the suffix IRE.



In the chart below, note that while the different colors are designed to indicate certain ranges, these ranges are user-adjustable for personal exposure preferences. Red, being the "white clipping" indicator will appear for any part of the image at the user-set exposure value and above, up to the highest brightness of the image (109%). Yellow will appear from the user-set exposure value up to the bottom of the Red exposure range. Purple is the bottom of the exposure range, so it will appear for any part of the image at the user-set exposure value or below. Blue will appear from the user-set exposure value to the top of the Purple exposure range. As Green is in a middle range of exposure, the top and bottom of its range can be set. It is possible to overlap some of the exposure ranges, at which point some of the colors will not appear. Other parts of the image are rendered in varying densities of gray. There is a reference bar at the bottom of the image indicating the exposure range each color represents.

COLOR	PRESET	ADJUSTMENT RANGE	INTENDED INDICATION
RED	90% & UP	70-109%	White clipping
YELLOW	70% & UP	70-109%	Near overexposure
GREEN	38-45%	30-70%	Middle grey or skin tone
BLUE	10% & BELOW	0%-30%	Black underexposure
PURPLE	5% & BELOW	0%-15%	Black clipping

ZEBRA

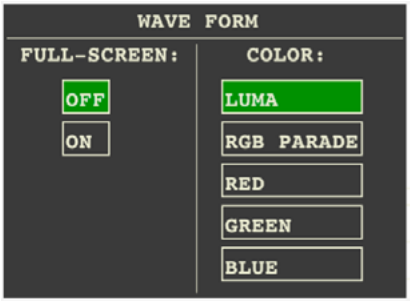
ZEBRA

Tapping button activates Zebra. Holding button opens Zebra settings. A Zebra stripe (//////) is an exposure tool to indicate any part of the image that is at or above a particular brightness. Adjustment range for the Zebra setting is 70-109%. A future free firmware update will add a second Zebra stripe option.

WFM (WAVEFORM)

WFM

Tapping button activates waveform. The waveform is based on the signal shown on the Odyssey7Q OLED. When in Multi-stream mode, if two signals are selected then the waveform can be used to compare two side-by-side images.

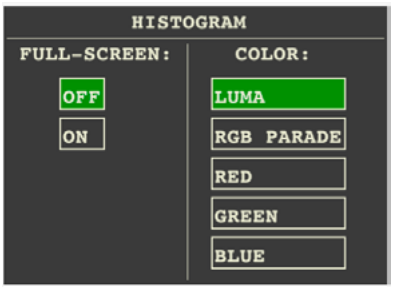


Holding button brings up waveform settings. A waveform is an exposure tool used for measuring the brightness of the image throughout the frame. It can be set for overall brightness [Luma], with the three primary colors separated and displayed individually [RGB parade], or as the individual primary colors only [red] [Green] [blue]. The waveform can be displayed across the full width of the image display or in the lower right corner. With the large display, the RGB parade shows three individual waveforms side by side in the appropriate colors, while in the small display mode they are overlapped. The Waveform background can be switched between opaque and transparent to allow the video image to be visible behind the waveform for reference. A graticule overlay indicates exposure value references in 20% increments from 0%-100%, with an additional reference at 109%.

HIST (HISTOGRAM)

HIST

Tapping button activates Histogram. Holding button brings up Histogram settings. A Histogram is an exposure tool indicating brightness by volume of image across a horizontal plane. The brighter the image the farther it is to the right. The more of an image registering at a particular brightness the taller the line graph at that brightness. It can be set for overall brightness [LUMA], with the three primary colors separated and displayed individually [RGB PARADE], or as the individual primary colors only [RED] [GREEN] [BLUE].



The Histogram can be displayed across the full width of the image display or in the lower right corner. With the large display, the RGB PARADE shows three individual Histograms one above another in the appropriate colors, while in the small display mode they are overlapped. The HD video image is visible behind the Histogram at all times for image reference.

HIDE (HIDE MENUS & SCREEN OVERLAYS/ VIDEO)

HIDE

While the Odyssey7 and Odyssey7Q's OLED screen provides an excellent image with intuitive touch screen controls and information displays, sometimes one does not want to see it all. The Hide function can be set to make either the controls & displays disappear or the video image go black. A tap anywhere on the screen brings the full display back.

ODYSSEY

Sub-Menu 1	Sub-Menu 2	Sub-Menu 3	Option	Description	Additional Information
SET	Activation	Unit	Enter Key or 'OK'	For registering Odyssey7Q (required)	Tap to reveal a key code prompt. To activate the Odyssey7Q after initial purchase, go to www.Odyssey7Q.info to register the unit. Once this is completed, anytime one wishes to purchase or rent a recording option, return to the Convergent Design website and follow the prompts. The website will present a code which can then be entered into the Odyssey7Q on the [activation] menu page. To see if a selection has already been enabled, tap on that option's button to see if [active] appears.
		FS700 Raw	Enter Key or 'ACTIVE'	Raw output of Sony FS700	
		Canon Raw	On	Raw output of Canon C500	
		ARRIRAW	→	Raw output of ARRI ALEXA	
		HD/2K Raw		Raw output of various industrial cameras	
		Multi-Stream		Record up to four HD signals simultaneously	
	DEMO MODE: ALL AVAILABLE RECORD OPTIONS ARE FUNCTIONAL IN A DEMO MODE, BUT IF THE OPTION HAS NOT BEEN ACTIVATED THE IMAGE FOR THAT OPTION WILL APPEAR WITH A LARGE BLUE BAR "WATERMARK" ON SCREEN WHEN RECORDING. THIS BAR IS RECORDED IN THE IMAGE FILE.				
	Time	→	→	Set the appropriate time.	**IMPORTANT FOR RECORDING OPTION RENTALS**
	Date	→	→	Set the appropriate date.	
	Reset	Menu	→	Restore all default settings.	
		Metadata		Resets metadata fields	
SSD's	Format SSD 1	→	→	Permanently erases everything on SSD1.	**FORMATTING IS A DESTRUCTIVE PROCESS AND WILL ERASE ANY FILES CURRENTLY ON THE SSD. BE SURE TO DOWNLOAD ALL FILES BEFORE FORMATTING.**
	Format SSD 2	→	→	Permanently erases everything on SSD2.	
	Format Both	→	→	Permanently erases everything from both cards.	
	Recover SSD1	→	→	Non-destructively recovers / rebuilds file system of SSD1	**Use only in extreme cases (such as if a computer corrupts the SSD's file system).**
	Recover SSD2	→	→	Non-destructively recovers / rebuilds file system of SSD2	
Formatting should be performed at the start of use of any new SSDs and the start of any new project. Recovery is for when the SSD was not properly dismounted from the Odyssey7Q. This includes physically removing the SSD without running the eject sequence, sudden loss of power to the Odyssey7Q or improper powering down of the Odyssey7Q. The Recover process accesses any incomplete files on the SSD and, when possible, properly closes them. **NOTE: FORMATTING OF SSDS SHOULD ALWAYS BE PERFORMED ON THE ODYSSEY7Q.**					
ABOUT	→	→	→	Displays the firmware version, serial number, warranty status, and which Options are activated.	**Check the website regularly to ensure you are running the current firmware.**

SETUP

Sub-Menu 1	Sub-Menu 2	Sub-Menu 3	Option	Description	Additional Information
MONITOR → RECORD	4:2:2 HD -> ProRes HD (.MOV)	→	→	10-Bit Apple ProRes 422 HQ 220Mb Compressed	This determines the type of signal coming into the Odyssey7Q and notes how it is to be recorded. Note that some of these selections are paid optional record functions and if not licensed in the unit will output with a "watermark" over the image.
	4:2:2/4:4:4 → 4:4:4 (.DPX)	→	→	2K and HD video in 4:2:2 or4:4:4, recorded as 4:4:4 .DPX stacks (NOTE .DPX stacks are always saved as 4:4:4)	
	FS700 RAW → RAW (.DNG)	→	→	FS700 Record Option required.FS700 RAW 4K and 2K data saved as.DnG stacks	
	CANON RAW → RAW (.RMF)	→	→	Canon Record Option required.CANON C500 RAW 4K and QHD data saved as .RrMF files	
	ARRIRAW → RAW (.ARI)	→	→	ARRI ALEXA RAW data saved in .ARI files (ARRIRAW Record Option required.)	
	4:2:2 HD Multi-Stream	→	→	Up to four HD video signals viewed at once (note Multi-Stream Recording will be an option at a later time; Multi-Stream Monitoring is included with the Odyssey7Q)	
	FS700 4K RAW to Apple ProRes 422 (HD)	→	→	4K RAW to HD 10-bit Apple ProRes 422(HQ). "4K2HD" (FS700 Record Option required.)	
4:2:2 / 4:4:4 SOURCE	ARRI	→	→		
	CANON	→	→		
	PANASONIC	→	→		
	RED	→	→		
	SONY FS700	→	→		
	SONY OTHER	→	→		
	OTHER	→	→		
	This tells the Odyssey7Q the type of camera sending a standard HD video signal. Manufacturers use different protocols for sending record triggers, metadata and timecode. They also define their image LOG curves differently, which effects how the Odyssey7Q can correctly LUT the signal. Additionally there are some specific signal variants for certain frame rates that are particular to individual camera designs.				

RECORD

Dropdown	Sub-Item	Sub-Menu 3	Option	Description	Additional Information
TRIGGER	Rec Button	→	→	Record button on Odyssey7Q Upper Tool Bar	
	Camera	→	→	Record triggers on camera cues the Odyssey7Q	Compatible cameras include Canon C300, XF305, Sony F3, FS700, ARRI ALEXA (via SDI Remote camera setting).
	Timecode			**Future Free Firmware Update**	
	Remote	→	→	**Future Free Firmware Update**	
CLIP	(Clip Name) (Clip#) (AAAAAAAA)(000)	→	→	Enter in clip naming convention. Will increase sequentially with each clip.	With ARRIRAW and Canon Raw, the Clip Name is set by the camera.
PROJECT	Frame Rate	Follows Input	→	Default setting; aligns to the incoming frame rate for all frames rates 60p and below.	Determines playback frame rate onto SSDs. It can follow the source frame rate or be set to a specific record frame rate. The [FOLLOWS INPUT] default setting aligns to the incoming frame rate for all frames rates 60p and below. Above this rate, the default project rate for 100/200fps is 25fps and for 120/240fps the default project rate is 24fps. This is to allow an even division of frames so that the timeline file will play back smoothly.
		23.98 FPS	→		
		24.00 FPS	→		
		25.00 FPS	→		
		29.97 FPS	→		
		30.00 FPS	→		
		48.00 FPS	→		
		50.00 FPS	→		
		59.94 FPS	→		
		60.00 FPS	→		

INPUTS

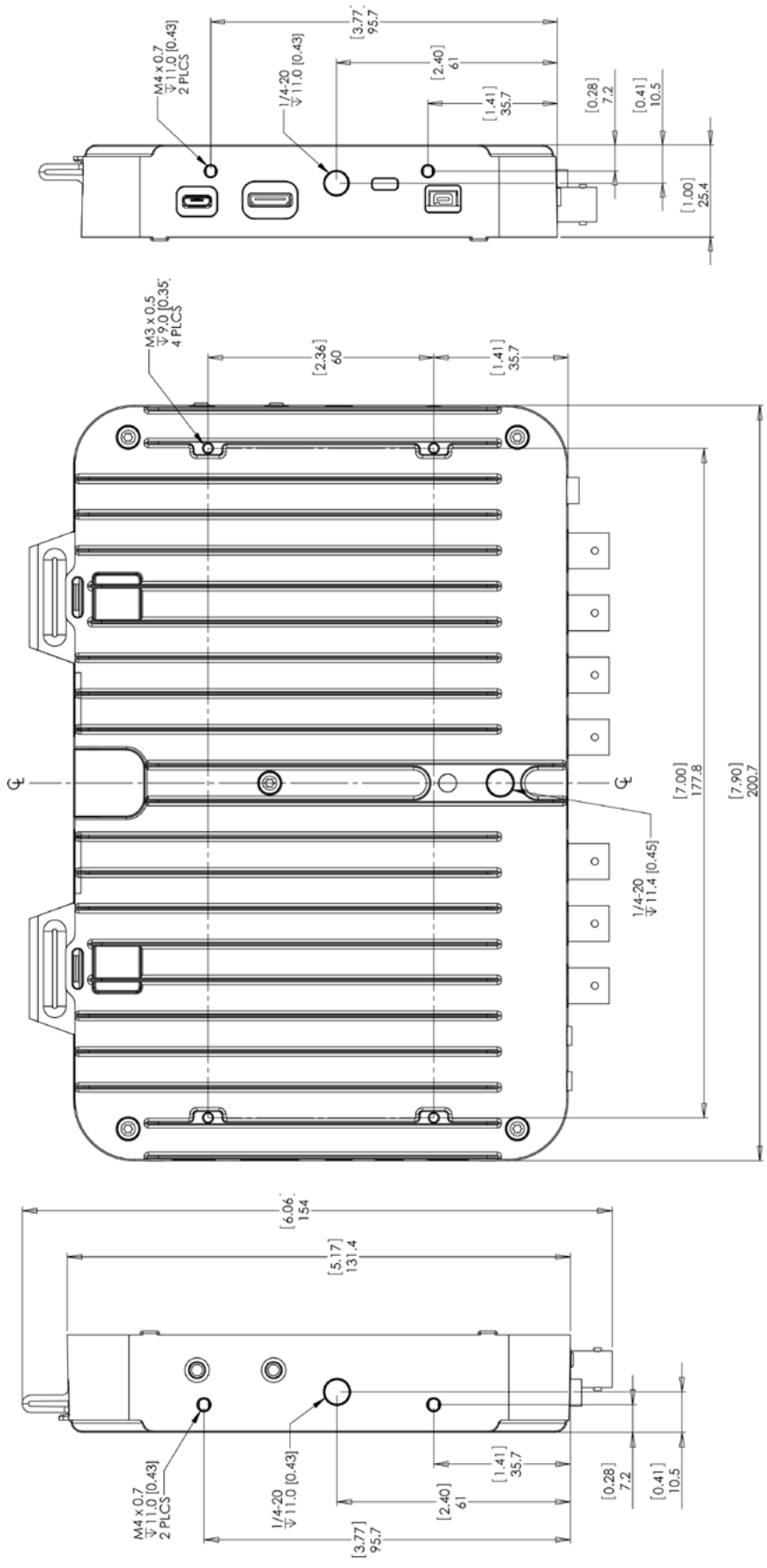
Sub-Menu 1	Sub-Menu 2	Sub-Menu 3	Option	Description	Additional Information
AUDIO	Channels	2	SDI	Currently limited to two channels of SDI or HDMI embedded audio. This menu will be expanded in a future free firmware update.	
TIMECODE	Source	SDI	2		At high frame rates, some cameras will not generate timecode. In these cases the Odyssey7Q will generate a Record Run timecode from its internal clock. ARRI: LTC Not supported in ARRIRAW
		LTC	LTC	LTC to 6 pin via remote port and adaptor cable.	
		SEED / REC RUN	→		
VIDEO	Progressive/PSF	→	→	For 1920x1080 video signals structured as true progressive (P) or progressivesegmented frames (psf).	
	Interlaced	→	→	For 1920x1080 video signals structured as interlaced fields (i). Note that some cameras carry progressive video embedded within an interlaced signal. See 3:2 Pulldown	
	3:2 Pulldown (to 24p)	→	→	For 24p video signals striped within a 60i signal. Extracts the 24p video, records it as 1080/24p and discards the excess fields for greater efficiency and smoother post.	Records a 1080/60i video signal without alteration.

OUTPUTS

Sub-Menu	Sub-Menu 2	Sub-Menu 3	Option	Description	Additional Information
OVERLAYS	ON	→	→	Replicates OLED Image Analysis tools display over the SDI and HDMI outputs.	
	OFF	→	→	Leaves SDI and HDMI output signals clean when displaying OLED Image Analysis tools.	
Headphone	+/-dB	→	→	Adjusts Audio Out monitor level. Range from -102dB to +12dB	
REC TALLY	On	→	→	Green Tally = Ready	Activates Tally signal over SDI when Odyssey7Q is recording.
	Off	→	→	Red Tally = Recording	
LEGALIZED	ON	→	→		Only displayed in Raw Modes (ARRI, Canon, Sony), not DPX or 4:22/4:4:4
	OFF	→	→		

Congratulations! You are through the MENU. Everything is easier from here.

Mechanical Drawings



Convergent Design Accessories

All Convergent Design products are available through our worldwide dealer network. Visit http://www.convergent-design.com/Dealers.aspx to find our nearest authorized dealer

POWER SUPPLY OPTIONS

The Odyssey7Q can accept DC power ranging from 6.5-34v. This means that small camcorder batteries, large camera bricks and even large block batteries or belts can be used to power the device.

Depending on monitor and record modes, the power draw from the Odyssey7Q can range from 8-15w. Even small camcorder batteries can power the Odyssey7Q for several hours.

The Odyssey7Q is supplied with a Convergent Design AC power supply (replacement part CD-OD-AC-PS). This is a universal switching power supply that can be used throughout the world, and comes complete with several interchangeable plug connectors. Only use a Convergent Design AC power supply on the Odyssey7Q.

The Odyssey7Q uses a *Neutrik 3-pin connector* for power input. Convergent Design has modified this connector for reliability, strength, and protection from shorting. Convergent Design supplies cables to 3rd party manufacturers of battery plates and other Odyssey7Q accessories.

ONLY USE A CONVERGENT DESIGN POWER CABLE ON THE ODYSSEY7Q.

Convergent Design offers four optional power cables for the Odyssey7Q.

Anton Bauer 12v power cable to Odyssey7Q (18")	CD-OD-DTAP	D-Tap
XLR-4 (generic 12v) power cable to Odyssey7Q (18")	CD-OD-XLR	
Fischer-3 (ARRI 24v) power cable to Odyssey7Q (18")	CD-OD-Fischer	
Flying lead (bare wire pigtail) power cable to Odyssey7Q (36")	CD-OD-Flying	

BATTERY PLATE OPTIONS

Convergent Design offers a series of rear plates for the Odyssey7Q that accept various manufacturers' small camcorder batteries.

Odyssey battery plate for SONY L-Series batteries	CD-OD-SLPlate
Odyssey battery plate for SONY U-Series batteries	CD-OD-SUPlate
Odyssey battery plate for Canon BP-9x Series batteries	CD-OD-CBPlate
Odyssey battery plate for Panasonic CGA-Series batteries	CD-OD-PCGAplate
Odyssey battery plate for JVC Camcorder-style batteries	CD-OD-JVCplate

Convergent Design also makes battery plates that can also hold and power a pair of Teradek Bolt video receivers along with the Odyssey7Q. Two camcorder batteries (one for the Odyssey, one for the Teradeks) are used or a single large battery. These plates are shipped in kits that include short SDI cables and power cables for the Odyssey and Teradeks.

Odyssey/Teradek battery plate for 2x Sony L-Series batteries	CD-OD-BOLT-SLPLATE
Odyssey/Teradek battery plate for 2x Sony U-Series batteries	D-OD-BOLT-SUPLATE
Odyssey/Teradek battery plate for 2x Canon BP-9x Series batteries	CD-OD-BOLT-CBPLATE
Odyssey/Teradek battery plate for 2x Panasonic CGA-Series batteries	CD-OD-BOLT-PCGAPLATE
Odyssey/Teradek battery plate for IDX V-mount batteries	CD-OD-BOLT-IDXPLATE
Odyssey/Teradek battery plate for Anton Bauer 3-stud batteries	CD-OD-BOLT-ABPLATE

ODYSSEY HOOD (CD-OD-HOOD)

The Convergent Design Odyssey Hood is a flexible three-sided sunshade for the Odyssey7 and Odyssey7Q. It attaches to the side 1/4"x20 mount sockets on the Odyssey. If there is another item such as a mount that uses these side sockets, the Odyssey Hood's bolts can be removed and the other item's bolts can be passed through the Hood into the Odyssey. The Odyssey Hood folds flat for storage and can rest atop the Odyssey within the Odyssey Case. When the Hood is folded the mounting bolts do not protrude long enough to make contact with any surface, so as not to scratch the Odyssey screen in transport.

ODYSSEY ALUMINUM TABLE STAND (CD-OD-AL-TS)

The Convergent Design Odyssey Aluminum Table Stand attaches to the Odyssey7 or Odyssey7Q. While only five ounces, it is tall enough to protect the cables and connectors attached to the bottom of an Odyssey. The design tilts back the screen for comfortable viewing while also centering the weight over the stand for balance.

The stand can support an Odyssey alone or with any Convergent Design battery mount with full clearance and stability. There is also a standard 5/8" socket with tie-down bolt to mount the stand onto a standard light stand or baby pin. The stand also functions as a "chest offset" when an Odyssey is worn with a neck strap so the operator doesn't have to look uncomfortably straight down.

ODYSSEY CASE (CD-OD-CASE)

The Convergent Design Odyssey Case is based on a Nanuk 910 with custom foam insert. The use of rigid foam means less is needed for protecting the gear and it can be precision cut. The main cutout for an Odyssey7 or Odyssey7Q includes removable layers of rigid foam to allow the Odyssey to fit snugly when bare or with a variety of battery plates and 3rd party accessory mounts. This includes all Convergent Design mounting plates, including the Teradek Bolt Adapter Plate, complete with wireless receivers mounted and all cables plugged in. An additional cutout is large enough to hold SSDs, cables, USB adapter, batteries, Teradek Bolt transmitters, etc.

ODYSSEY ULTRA-THIN SDI CABLE (CD-OD-SDI)

The Odyssey Ultra-Thin SDI Cable is a flexible and lightweight cable for use with the Odyssey7 and Odyssey7Q. The SDI cable is rated for 3G signals and is useful in camera-mounted installations where its thinness and flexibility will help keep it out of the way for operators. Despite its small size, the SDI Cable is quite rugged and can even be tied in knots without effecting performance. Standard length is 36" with custom lengths available on special order.

ODYSSEY UTILITY DRIVE (CD-SSD-UTILITY)

The Odyssey Utility Drive is designed as a lower cost alternative to the Odyssey Premium SSD media for secondary tasks. The Odyssey Utility Drive can be used for Odyssey7 & 7Q firmware updates, Odyssey7Q 3D-LUT files and other future functionality. The Odyssey Utility Drive will not record video files. It is intended for Odyssey7 & 7Q owners who do not wish to tie up an Odyssey SSD with utility features, or for Odyssey7 & 7Q owners who use their devices as monitors and do not need to purchase the more expensive recording media.

ODYSSEY SSD TO USB 3.0 ADAPTER (CD-SSD-USB3)

To connect an Odyssey SSD to a computer for downloading files, the computer needs to be able to mount an eSata 2.0 connection. For computers without such connectivity, the Convergent Design SSD to USB 3.0 Adapter is an inexpensive cable-style adapter to allow the Odyssey SSD to connect to a USB 3.0 port. 6Ghz transfer speed.

NOTE: While the Convergent Design USB 3.0 Adapter can be connected to a USB 2.0 port, download speeds will be extremely slow, requiring many hours to offload an SSD.

ODYSSEY RACK MOUNT KIT (CD-OD-RACK)

The Convergent Design Odyssey Rack Mount Kit accepts one or two Odyssey7 or Odyssey7Q units. Monitors face forward for easy viewing and tilt forward for access to SSDs. A pass through patch bay is included on the back along with short jumper cables for complete connectivity.

ODYSSEY SCREEN PROTECTORS

Replacement Odyssey7 Screen Protector (CD-OD-SP7): US List: $35
Replacement Odyssey7Q Screen Protector (CD-OD-SP): US List: $35
The Convergent Design Odyssey Screen Protector is a stick-on/peel-off clear shield for the glass screen on the Odyssey7 and Odyssey7Q. It includes the inked labeling for the connectors and controls on the device. This is a replacement item for the screen protector that ships installed on the Odyssey7 and Odyssey7Q.
ODYSSEY MICROFIBER CLEANING CLOTH (CD-OD-MFC):
Cloth for cleaning the Odyssey screen.

For information on where to buy these accessories and other Convergent Design products please visit the Dealers section of our website at http://convergent-design.com/dealers.html

Third-Party Accessories

Convergent Design works with numerous manufacturers for additional support products for the Odyssey7Q. While we have provided information and support, Convergent Design makes no claim and accepts no responsibility in the use of these products. These products are available through these manufacturers' own dealers.

SATA ADAPTERS

THUNDERBOLT	Seagate GoFlex Model STAE128 or STAE129 We have measured 325-375MB/sec transfer rates to a fast RAID drive, depending on your configuration.
USB 2.0 / 3.0	Seagate GoFlex Model STAE104 or Calvary USB 3.0 Adapter, Model CAUSM2001. An ExpressCard 34 to USB 3.0 adapter may be required for full USB 3.0 compatibility. However, USB 2.0 works fine to copy firmware updates to the SSD.

MOUNTING AND BATTERY PLATES

Ocean Video manufactures the EnduroPower mounting plate with Anton Bauer Gold Mount or IDX V-Lock battery mounts. The EnduroPower plate includes numerous threaded mounting points for accessories.

Nebtek manufacturers the Odyssey7 Power Cage with Anton Bauer Gold Mount or IDX V-Lock battery mounts, or dual camcorder battery mounts for Sony, JVC Canon or Panasonic compatible batteries. The Odyssey7 Power Cage includes numerous threaded mounting points for accessories.

SOFT CASE

PortaBrace manufactures the Flat Screen Monitor Case – Convergent Design, which is made of waterproof Nylon Taslan. Velcro flaps allow access to all sides and an integrated hood folds down as a screen protector.

OLED SCREEN PROTECTOR

Pro K Solutions manufacturers the OCP optically Clear Protection stick-on / peel-off screen protector for the Odyssey7Q. The OCP is scratch-resistant, washable and will not interfere with the OLED's touchscreen functionality.

NEW FEATURES

ADVANCED PLAYBACK CONTROLS FOR ALL FORMATS

This is a complete revamp of the Playback system. Standard deck-style controls for Play/Pause, single-frame step forward or step-back, and skip forward or back to next/pervious clip. Additionally, an interactive scrub bar allows the user to quickly access any section of a clip simply by dragging a finger across the OLED touchscreen. All recordable formats are supported and more detailed information is noted in the Play List.

Playback Controls:
Clip Preview (First frame of clip)
Playback Scrubbing
Pause
Next Clip / Previous Clip
Fast Forward / Rewind

EXPANDED HD FORMAT SUPPORT IN APPLE PRORES 422 (HQ)

In addition to 1080p video, the Odyssey7 and Odyssey7Q now support 1080i and 720p signals, as well as 24p signals embedded within 1080i video streams using “3:2 Pulldown”. Additionally, upon selecting 3:2 PULLDOWN, the Odyssey7 and Odyssey7Q will remove the excess material and record a pure 1080p23.98 video stream for more efficient storage and ease of post.

Added Formats:
1080i 59.94
1080i 50
1080i (23.98p over 59.94i) (3:2 Pulldown Support with removal)
720p 59.94
720p 50

MONITORING LUTS FOR HD VIDEO

Monitoring LUTs for the LOG outputs from several popular cameras are now supported in HD video recording in both Apple ProRes 422(HQ) and Uncompressed DPX (Odyssey7Q only). All monitoring LUTs conform selected LOG signals to REC709. Monitoring LUTs are applied to the OLED screen, video outputs and Image Analysis tools, but not to the recorded files.

Supported LOG Formats:
ARRI Log-C
Canon C-Log
Sony F3 S-Log
Sony F5 / F55 S-Log2
Sony F5 / F55 S-Log3
Sony FS700 S-Log2

WAVEFORM OPACITY

Opacity is now selectable when using the Waveform. The background of the waveform can be either translucent as in previous firmware, or selected to be solid black so that the waveform display can be more clearly seen.

IMAGE ANALYSIS TOOLS RESETS

Menu page resets are now available in the settings for False Color, Focus Assist and OLED menus.

ODYSSEY UTILITY DRIVE FUNCTIONALITY

Added support for firmware updates via the new Odyssey Utility Drive.

TIMECODE TRIGGERING

Added record triggering via rolling of timecode when recording in Apple ProRes 422 (HQ) (1080 formats over SDI only).

INTERNAL TIMECODE GENERATOR

Activated internal timecode generator.

-Seed Record Run
-Seed Time of Day Timecode
-Seed Time of Day Timecode Drop Frame

LTC TIMECODE SUPPORT

Enabled LTC timecode input. Record triggering over LTC not supported

INCOMING VIDEO FORMAT MENU SETTING

For setting type of 1080 signal between 1080p/psf, 1080i and 1080 23.98 over 60i (3:2 Pulldown). Selecting 3:2 Pulldown sets recording to remove 3:2 pulldown cadence and record material as 1080p23.98. 3:2 Pulldown in 720p not supported.

[INPUTS] [VIDEO] [PROGRESSIVE / INTERLACE / 3:2 PULLDOWN TO 24P]

SMPTE COLOR BARS

On startup in Apple ProRes 422 (HQ) recording mode and in modes when input does not match selected recording mode.

DUAL-LINK RGB 4:4:4 SUPPORT FOR SONY F3

Record RGB 4:4:4 from the Sony F3 via 1.5G Dual-Link SDI at 1080/23.98psf, 1080/25psf and 1080/29.97psf.

NEW FEATURES, RECORD OPTIONS (ODYSSEY7Q ONLY)

SONY FS700 4K RAW 100P/120P SUPER SLOMO

Record 100fps or 120fps in 4K RAW in a 440 frame burst using the camera's internal memory buffer. Triggering is set on the camera at either the start of the memory buffer (capture the 440 frames after trigger is pressed) or at the end of the buffer (capture the 440 frames that occurred before the trigger is pressed). Selecting End Half Trigger captures the 220 frames prior to the trigger being pressed. Note triggering must be from FS700 in this mode.

440 frames equals 3.7 seconds of real time at 120fps and 4.4 seconds at 100fps. 440 frame played back at 24fps lasts more than 18 seconds. Transfer output speed from camera to Odyssey7Q is at 60fps (120fps material) or 50fps (100fps material).

ARRIAW & CANON 4K RAW RECORD OPTION RENTALS NOW AVAILABLE

- Rentals are based on a 24hr period. Rentals can be added in any 24hr increment to a maximum of 31 days for one rental.
- A rental commences the first time a record is performed in the rental codec. This starts the 24-hour clock.
- Note that once a 24hr rental period commences the Odyssey7Q's clock cannot be adjusted.
- After 24hrs the clock may be adjusted. When the next record is performed the next 24hr rental commences, locking out changes to the clock.
- Once a rental is input into a unit, there is no way of retrieving or transferring to another unit. Rentals are unit specific, and must be urchased via our website.
- To activate a rental, enter the 8-character key into the Odyssey7Q's activation section in the menu.
- To check the status of a rental tap the Record Status box in the Upper Tool Bar.
- When the total rental period gets down to 2 days the rental info in the Record Status box will change to yellow.
- When the total rental period drops below 24hrs the remaining rental time will display in the form of minutes in the Record Status box and will flash for the final hour.
- When the total rental period drops below one minute and a recording is already in progress, that entire clip will be recorded without a watermark regardless of length up to a maximum of 80 mins. This will allow a final shot to be completed, after which the time remaining indicator will change to zero minutes in white text.
- Note that rentals can be performed on an Odyssey7Q for which a full purchased Record Option has been purchased and activated, but then deactivated by the owner. This allows owners to rent out an Odyssey7Q without a Record Option included and then charge separately for the rental of the Record Option.

Added Support for ARRIRAW 1.5 DL and 3G DL 23.98-60p

FIXES & IMPROVEMENTS

- FIXED Occasional file corruption when using PIXEL ZOOM while recording Apple ProRes 422(HQ
- FIXED Occasional file corruption when recording a 1080psf signal
- FIXED Playback issues at end of a file
- FIXED Image scaling in psf and interlaced signals that showed jagged lines in PIXEL ZOOM.

- FIXED Black line in image from Canon 5Dmk3 in 1080p23.98
- IMPROVED Hide Menu/Video Functionality
- IMPROVED SSD detection
- IMPROVED PIXEL ZOOM movement & image refresh
- IMPROVED HDMI detection
- IMPROVED Firmware update ease by accepting file or folder

FIXES & IMPROVEMENTS, RECORD OPTIONS & OTHER

- FIXED Canon C500 QHD RAW (3840x2160) file corruption at 50p & 60p
- FIXED Project Rate Playback for DPX & RAW files (i.e., 50p/60p inputs at 24p Project Rates will playback in slow motion)
- IMPROVED Sony FS700 4K/2K RAW S-Log2 to REC709 LUT
- IMPROVED Sony FS700 4K2HD S-Log2 to REC709 LUT
- IMPROVED Sony FS700 4K2HD REC709 (800%) to REC709 LUT
- IMPROVED Sony FS700 4K2HD REC709 color science (internal LUT) FIXED Occasional file corruption when using PIXEL ZOOM while recording Apple ProRes 422(HQ)

KNOWN ISSUES

AUDIO

- Occasionally in DPX mode the audio will swap channels during recording
- Occasionally the SDI/HDMI output will not have audio. Cycle power onOdyssey to correct.
- Occasionally the SDI/HDMI output audio will have a static pop on startup.
- Occasionally when recording in Apple ProRes 422(HQ), the audio will record static for the last few frames. Add two seconds of pre- and post-roll to avoid.
- Occasionally headphones output will flip channels

PIXEL ZOOM

- Occasionally when recording a PSF or Interlaced signal in Apple ProRes 422 (HQ), engaging PIXEL ZOOM can result in a black image on the OLED panel and video outputs. The recorded signal is not affected and the issue is corrected by cycling through the PIXEL ZOOM settings.
- Occasionally in Playback, engaging PIXEL ZOOM can result in a horizontally stretched image on the OLED panel. The recorded signal is not affected and the issue is corrected by cycling to Record mode and then back to Playback.
- In Playback with 1080i60 material, PIXEL ZOOM is not supported and will blank the screen.

PLAYBACK

- In Playback with 1080i60 material, PIXEL ZOOM is not supported and will blank the screen.
- In Playback, audio sync may slip up to four frames after scrubbing through a clip. This does not affect the recorded file.
- In Playback, very fast scrubbing can result in shifted colors. Normal colors return when scrubbing completed.

FRAME RATE

- Occasionally when changing frame rates the Odyssey does not detect the source change. To remedy this disconnect and reconnect the source, or cycle power on the Odyssey.

KNOWN ISSUES, RECORD OPTIONS & OTHER

PLAYBACK

- Occasionally in Playback, when scrubbing through RAW or DPX files the image will become pixelated, but will correct itself after scrubbing.
- In Playback, when scrubbing RAW files there is no audio.
- Occasionally in Playback, when selecting 2K and then 4K RAW clips the preview will become blue & yellow or pixelated. To correct select a different clip, then reselect the original clip.
- Occasionally in Playback, when viewing FS700 2K RAW files playback will show bad colors on initial clip selection. To resolve de-select then re-select the clip.

OTHER

- Occasionally in ARRIRAW when switching between 1.5 DL and 3G DL the image will be incorrect. To correct, disconnect and reconnect one of the SDI inputs.
- 2K 12-bit/10-bit RGB 4:4:4 from the C500 has pink line on the SDI and HDMI output but not in the recorded image.
- In FS700 RAW, there is a vertical line on the right side of the OLED and video output in some images. This is an artifact of the debayer and not in the recorded image.
- Occasionally when recording in DPX or RAW, engaging PIXEL ZOOM can result in a horizontally stretched image on the OLED panel. The recorded signal is not affected and the issue is corrected by cycling through the PIXEL ZOOM settings.
- Occasionally in ARRIRAW after switching from 1.5 DL to 3G DL a Camera Trigger issue can cause the unit to record 2-4 6-frame clips, then work correctly.
- FS700 LUTs have been adjusted to better mimic the camera when recording in RAW or 4K2HD.
- Adobe Premier FS700 Raw (CinemaDNG file support) is pending next update from Adobe to correct issue with highlights turning to pink.
- Adobe Speed Grade FS700 Raw (CinemaDNG file support) is pending next update from Adobe to correct imported frames showing as green. Also note that if files are first imported via Premium, this circumvents issue.
- In Resolve 11 Lite, FS700 RAW (CinemaDNG file support) underexposed images may appear green when using “Auto-Color”. We are in contact with BlackMagic Design about this issue.

OTHER NOTES

NOT SUPPORTED AT THIS TIME

- 720p 24/25/30 signal (720p with 3:2 or 2:2 Pulldown)
- SD NTSC/PAL video
- 1080p 50/59.94 recording in Apple ProRes 422 (HQ)
- Analog audio input
- File name matching from the camera in video recording
- LTC Timecode Trigger
- HDMI Timecode in
- HDMI Record Trigger
- HDMI source in Multi-Stream Monitoring
- 720p 50/60 signal in Multi-Stream Monitoring
- Multi-Stream Recording
- User-Loadable and custom LUTs
- C500 120fps, 2K @ 50p, 59.94p

OTHER

To playback Apple ProRes 422(HQ) files in QuickTime Player X, the files must be first run through our Apple ProRes 422(HQ) Utility to be optimized for the recently released Apple ProRes 422(HQ) Codec update. If files are not optimized, then they will play the first second of audio only. This is not an issue when playing in FCPX.

OTHER NOTES (ODYSSEY7Q ONLY)

OTHER

- FS700 LUTs have been adjusted to better mimic the camera when recording in RAW or 4K2HD.
- Adobe Premier FS700 Raw (CinemaDNG file support) is pending next update from Adobe to correct issue with highlights turning to pink.
- Adobe Speed Grade FS700 Raw (CinemaDNG file support) is pending next update from Adobe to correct imported frames showing as green. Also note that if files are first imported via Premium, this circumvents issue.
- In Resolve 11 Lite, FS700 RAW (CinemaDNG file support) underexposed images may appear green when using “Auto-Color”. We are in contact with BlackMagic Design about this issue.

NOT SUPPORTED AT THIS TIME

- HDMI source in Multi-Stream Monitoring
- 720p 50/60 signal in Multi-Stream Monitoring
- Multi-Stream Recording
- User-Loadable and custom LUTs
- C500 120fps, 2K @ 50p, 59.94p

-Playback of "FS700Raw to HD" is often shifted, or does not playback correctly.
*Note the recorded files are correct, this is simply a playback issue in this "mode"
*Note that if the files are played back under "4:2:2 ProRes HD" the files will playback correctly.
-This will be corrected with the next firmware release.

-Playback in all Raw Recording / HD Recording does repeat when the clip reaches the end of the file.

-Playback in all Raw Recording / HD Recording can occasionally have artifacts in the video when the clip reaches the end of the file in playback.

-Loop Play does not currently supported at this time.
-This will be corrected with the next firmware release.

-Occasionally Recordings done in HD with a PSF source can have shifted video for the first second of recording, after this the video will be correct.
*Note Convergent Design always recommends to Pre and Post Roll on any take to avoid any potential issues.
-This will be corrected with the next firmware release.

-FS700 RAW (4K / 2K Cinema DNG) Files are not currently supported in Adobe Products.

-Viewing LUT when recording HD Compressed / Uncompressed Log video is not currently support.

-Occasionally when a SSD is connected to Mac OSX Mavericks via Thunderbolt, the first clip may not appear, simply remove the SSD, then reconnect, and the clip will appear.

-In extremely rare instance, when recording HD compressed, a file will be corrupted.
-This will be corrected with the next firmware release.

-The SDI output when recording Canon Raw Quad HD (3840x2160 RAW) or 12 Bit, or 10 Bit RGB 4:4:4 DPX from the C500 will be RGB 4:4:4.
-This will be corrected to 4:2:2 with the next firmware release.

-Occasionally when switching between RAW recording and HD Recording a SSD countdown may occur.
*Note if this occurs, simply remove and reinsert the SSD, or power down and power up the unit.
-This will be corrected to with the next firmware release.

-Double tap has been disabled due to the new zoom conflicting with the touch, now Monitor button is Full>1:1>2:1>Full.

-When viewing the Histogram, or Waveform monitor at the start of a record, occasionally the display markers will go away, but return at the end of the record.
-This will be corrected to 4:2:2 with the next firmware release.
-Playback Audio may differ when playing back on the unit at HD 50/60p

-Playback of Raw then ProRes Files does not work
* Note (Playback must always match current mode, for Example : ProRes to playback ProRes)

-The monitor may display a black image if the camera output does not match the correct Odyssey7Q mode. 720p or any SD source.
-This will be corrected to with the next firmware release.

-In 4K Raw (Canon C500 and FS700) the live image is a letterbox from the 4K steam, thus the live image will be slightly to the top left.

-In FS700 4KRaw to HD the scaled image is a center cut of the 4K Raw signal, thus it may be slightly to the left compared to the internal media.

-If the update fails for any reason please power off the Odyssey repower it and run the update again.

NOT SUPPORTED AT THIS TIME

-FS700 4K 100 / 120
-FS700 4K 50/60p 4K2HD ProRes (Only 23.98, 25, 29.97 supported)
-Canon 4K Half Raw 120
-Canon 4K x 1080
-Canon "slow and fast" frame rates, included HD 100 / 120
-Canon 2K / 1080p 12 bit 50 / 60
-Filenames matching the camera when recording DPX (10 / 12 Bit) or HD ProRes.
-ProRes 1080p 50 / 59.94
-ProRes 2K 23.98-30
-ProRes 4K 23.98-30
-Multistream recording

NEW CINEMA DNG RECOMMENDED SETTINGS / DAVINCI RESOLVE.

FS700 RESOLVE WORKFLOW SETTINGS

FS700Raw Slog2 (Slog) Picture Profile Settings (Recorded Profile from the camera.)

-Under **EDIT CINEMADNG CODEC**
-Decode Quality **Full Res.**
-Decode using **CinemaDNG Default**
-White Balance **As Shot** (Greyed out)
-Color Space **Rec709** (Greyed out)
-Gamma **Rec709** (Greyed out)
-Select Highlight Recovery off (Not needed)

-FS_700RAW_SLOG.cube
New SLOG2 file has been created and should match AVCHD.

-Rec709 looking file
Rec709 Lut is still needed This will result in a Rec709 looking file
(New LUT is still currently in process)

FS700Raw Rec709 (IT709) Picture Profile Settings (Recorded Profile from the camera)

-Under **EDIT CINEMADNG CODEC**
-Decode **Quality Full Res.**
-Decode using **CLIP***
-White Balance **As Shot**
-Color Space **Rec709**
-Gamma **Rec709**
-Select Highlight Recovery (Not needed)

***CinemaDNG Default, or Camera Metadata can also be used for this setting.**

(No Lut is needed)

FIRMWARE FIXES

-Tearing in the live image
-False Triggering with FS700 when formating media in the camera
-False Triggering with FS700 when Switching between 2K240 and 2K24
-Live Image White Balance Issue FS700 2K Raw
-Playback now correctly matches project rate
-Playback would be shorter than the record when recording high speed.
-Improved SDI source detection when changing frame rates with Odyssey connected.
-Display artifacts often seen as a “missing line in the display”
-Recorded artifacts in the video when recording FS700 Raw.
-Picture Profile detection with the FS700
-Frame rate detection with Canon C500 has been improved
-SSD detection on insertion and power up has been greatly improved.

NEW FEATURES (ALL MODES)

ZOOM MEMORY

When using Pixel Zoom, the screen coordinates in 1:1 and 2:1 zoom modes are remembered from previous use. Drag with finger on OLED display to position zoom window. Window will return to same position upon returning to Pixel Zoom setting. Reset zoom window to center by tapping frame reference map in lower right corner. Coordinates retained until changing record mode or powering down Odyssey7Q.

MULTI-STREAM

Multi-Stream interface updated with A/B/C/D input selector buttons. Multi-Stream initializes in Quad Split view (display divided into four separate images). Tap A, B, C, or D buttons to select a single input for full screen display. Inputs can be directly switched to by selecting the corresponding button without need to scan through other inputs. To return to Quad Split view, tap on the currently selected input to de-select it.

SONY FS700 RECORD OPTION

FS700 4K -> HD ProRes (4K2HD)

4K2HD in REC709 (800%)
Added support for REC709 (800%) gamma setting. On FS700, in Picture Profile menu, select a PP with Gamma set to ITU709(800%). This setting increases Dynamic Range in highlights by three stops.

4K2HD LUTs
Added LUT function in 4K2HD mode. If S-LOG2 or REC709 (800%) is selected as camera gamma, tapping LUT button applies a LUT to adjust viewed image to a standard REC709 without altering the recording. LUT is applied to the OLED display as well as SDI and HDMI outputs.

FIXES & IMPROVEMENTS

ALL MODES

• Menu setting **MENU » OUTPUTS » MONITORING** changed to **OVERLAYS** to more accurately reflect function. On/off setting enables/disables image analysis tools such as Waveform and False Color to output over video signal to SDI and HDMI outputs.

• Waveform and Histogram markers remain available during recording

MULTI-STREAM

- Fixed support for PSF input signals (1080psf 23.976/24/25/29.97)

PRORES(HQ)

- Reduced extremely rare file corruption occurrence on particular units. Error only occurs after more than one hour of continuous recording and even then it is a rare event.
- HDMI input expanded from legalized to full range
- Fixed “Variframe mode detected” compatibility issue with Canon C300

4K2HD

- Reduced color fringing at high contrast edges
- Reduced noise in dark areas

Apple ProRes(HQ) & 4K2HD

- Fixed multiple file playback
- Fixed audio channel flipping between ProRes files within a clip
- Fixed end of clip playback freeze of ProRes files
- Fixed playback shift on Odyssey7Q
- Fixed Timecode accuracy on file transitions within a clip

DPX

- Fixed end of clip playback issues

KNOWN ISSUES

Apple ProRes(HQ) & 4K2HD

- Extremely rare file corruption occurrence on particular units. Error only occurs after more than one hour of continuous recording and even then it is a rare event.

Apple ProRes(HQ)

- HDMI input audio does not pass through to SDI & HDMI outputs
- With HDMI input, repeated use of Pixel Zoom can cause file corruption and/or monitored image issues.
- In playback of HDMI recording on Odyssey, image can show subtle white static. This artifact is not contained in the recorded files.

FS700 RAW

- 200fps material plays back at incorrect speed. All frames are recorded correctly.

CANON RAW

- Playback of 50p & 60p material jittery. This artifact is not contained in the recorded files.

CANON RAW & ARRIRAW

- HDMI out not functioning.

MULTI-STREAM

- When de-selecting an input to return to Quad Split view, the de-selected input can sometimes appear horizontally stretched within the Quad Split.

Limited Warranty

Convergent Design warrants Odyssey7Q, and all included accessories, against defects in material and workmanship for a period of one year for registered units, and 3 months (for units used as rentals) from the original date of purchase.

Convergent Design disclaims all other warranties.

Convergent Design will not be liable for damages of any kind, including, but not limited to, compensation or reimbursement on account of failure of the unit, or any of its accessories, or its recording media, external storage systems, or any other media or storage systems to record or playback content of any type. Also Convergent Design will not be liable for a failure of the unit to properly record or play back for any reason. Convergent Design's total liability, in all cases, is limited to the actual purchase price.

If you discover a defect, please refer to our Return Merchandise Policy below.

During the warranty period, Convergent Design, at its option, will repair or replace product or product components, which in its opinion prove defective, provided the unit is returned, freight charges prepaid, to Convergent Design. Parts and components used in the repair process may be recycled or repaired, at Convergent Design's sole discretion. This warranty service will be performed at no charge to the registered owner, provided the product is shipped prepaid to Convergent Design.

Convergent Design reserves the right to determine whether a needed repair is subject to the warranty as per its provisions stated herein. Transit damage caused by inadequate packing violates the warranty. The warranty will be void if, in the opinion of Convergent Design, the product has been damaged through accident, misuse, misapplication, or as a result of service or modification not authorized in writing by Convergent Design.

Opening the unit and breaking the warranty seals, voids the warranty, unless specifically authorized in advance by Convergent Design.

THE FOLLOWING ARE NOT COVERED UNDER WARRANTY, AND ARE ITEMS FOR WHICH CONVERGENT DESIGN DOES NOT ACCEPT ANY RESPONSIBILITY:

- Damage due to the use of an AC power supply, other than the one supplied, or use of any inappropriate power source.
- Damage due to overheating conditions. The unit will attempt to shut down, if powered on, in the event of overheating, before damage can occur.
- Damage due to exposure to water, or other liquids, or excessive dust or sand.
- Damage caused by dropping or other rough handling.
- Damage caused by any overvoltage conditions or reverse voltage conditions.
- Any physical damage to the OLED and/or Touch Screen including scratches.
- Damage to any connector by using excessive force or rough handling.
- Any loss or corruption of video or audio data recorded on the unit, or any loss or corruption of data that is in any way associated with the Odyssey7Q.

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